

Current Status of All Claims in the Application:

1. (Currently Amended) A method for storing data, comprising the steps of:
defining a duty cycle for the downloading of data to a backup storage device, the duty cycle having a backup window period and an idle period;
receiving data during the backup window period;
storing the data on the backup storage device during the backup window period;
retrieving the data stored on the backup storage device during the idle period after the backup window period;
compressing the data retrieved from the backup storage device during the idle period; and
re-storing the data compressed during the idle period in compressed form on the backup storage device ~~the idle periods of~~ to reclaim space on the storage device.
2. (Original) The method of claim 1, wherein the compression of data is performed using a software data compression algorithm.
3. (Original) The method of claim 2, wherein the software data compression algorithm includes one of the following types of algorithms: a zip; a gunzip; a bzip; a b2zip; a Lempel Ziv; and a LZS (Lempel Ziv Stac).
4. (Original) The method of claim 1, further comprising successively repeating the receiving and storing of data during the backup window periods and retrieving, compressing and storing compressed data on the backup storage device during successive duty cycles respectively.

5. (Original) The method of claim 1, wherein the backup storage device is an emulated tape drive containing an array of hard drives.

6. (Original) The method of claim 1, wherein the data is downloaded over a network from a primary storage location.

7. (Original) The method of claim 6, wherein the data is downloaded over a fiber-channel connection between the primary storage location and the backup storage device.

8. (Original) The method of claim 6, wherein the data is downloaded over an ethernet connection between the primary storage location and the backup storage device.

9. (Original) The method of claim 6, wherein the primary storage location and the backup storage device are part of a storage array network.

10. (Original) The method of claim 6, wherein the primary storage location and the backup storage device are part of a network attached storage configuration.

11. (Original) The method of claim 1, wherein the backup storage device is directly electrically connected to a server.

12. (Currently Amended) ~~An apparatus~~ A storage system comprising:
a backup storage device ~~comprising~~;
an input/output port;
~~an array of hard drives configured as backup storage; and~~

a controller configured to ~~download~~ transmit data received from the input/output port to the ~~array of hard drives~~ backup storage device during a backup period and then reclaim storage space on the ~~array of hard drives~~ backup storage device during an idle period following the backup period by retrieving the data stored on the ~~array of hard drives~~ backup storage device, compressing the retrieved data, and then re-storing the compressed data on the ~~array of hard drives~~ backup storage device.

13. (Currently Amended) The ~~apparatus~~ storage system of claim 12, wherein the controller is further configured to execute a software algorithm to compress the retrieved data.

14. (Currently Amended) The ~~apparatus~~ storage system of claim 13, wherein the software algorithm includes one of the following types of algorithms a zip; a gnuzip; a bzip; a b2zip; a Lempel Ziv; and a LZS (Lempel Ziv Stac).

15. (Currently Amended) The ~~apparatus~~ storage system of claim 13, wherein the software algorithm is stored in a memory associated with the controller.

16. (Currently Amended) The ~~apparatus~~ storage system of claim 12, further comprising a fiber channel controller coupled between the controller and the input/output port which comprises an optical transceiver.

17. (Currently Amended) The ~~apparatus~~ storage system of claim 12, further comprising an ethernet controller coupled between the controller and the input/output port which comprises an ethernet transceiver.

18. (Currently Amended) The apparatus storage system of claim 12, wherein ~~the array of hard drives configured as backup storage~~ further ~~comprises~~ comprising a network hub and bridge circuit coupled between the ~~array of hard drives~~ backup storage device and the controller.

19. (Currently Amended) The apparatus storage system of claim 12, further comprising:

a primary storage location that allows transmission of uncompressed data from the primary storage location ~~coupled to the backup storage device through a network connection~~.

20. (Currently Amended) The apparatus storage system of claim 19, wherein the network connection is one of the following types of network connections: fiber channel or ethernet.

21. (Currently Amended) The apparatus storage system of claim ~~[[1]]~~ 19, wherein the primary storage location and the backup storage device are arranged in one of the following: a storage attached network or network attached storage configuration.

22. (Currently Amended) The apparatus storage system of claim 19, further comprising a plurality of clients and servers coupled to the primary storage location through a client network.

23. (New) A method for storing data from a primary storage device onto a backup storage device, the method comprising the steps of:

transmitting uncompressed data from the primary storage device to the backup storage device during a backup window period;

compressing the data during an idle period when uncompressed data is not being transmitted to the backup storage device; and
restoring the compressed data on the backup storage device.

24. (New) The method of claim 23 wherein the step of restoring occurs during the idle period.